

TARGA®

Herbicide

Emulsifiable Concentrate

<i>Active Ingredient</i>	<i>By Weight</i>
Quizalofop-P-ethyl	
Ethyl (R)-2-[4-(6-chloroquinoxalin-2-yl oxy)phenoxy]propionate	10.3%*
<i>Other Ingredients</i>	89.7%
TOTAL	100.0%

Contains petroleum-based distillates.

* Equivalent to 0.88 lb ai per gal

Net Contents: XXXXXXXX

EPA Reg. No. 33906-9

EPA Est. No. XXXXXXXX

KEEP OUT OF REACH OF CHILDREN

DANGER - PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand this label, find someone to explain it to you in detail.)

FIRST AID

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

If swallowed: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth to mouth, if possible. Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. **For emergencies involving this product, call toll free 1-800-982-1215.**

Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage. Contains petroleum distillate. Vomiting may cause aspiration pneumonia

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER! Corrosive. Causes irreversible eye damage. Harmful if swallowed, inhaled or absorbed through the skin. Do not get in eyes, on skin, or on clothing. Avoid breathing vapors or spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants.
- Chemical-resistant gloves made of barrier laminate or Viton.
- Shoes plus socks.
- Protective eyewear.

Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROL STATEMENTS

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR Part 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

USERS SHOULD: Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove personal protective equipment immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and invertebrates. For terrestrial uses, do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment wash waters or rinsate. This product may contaminate water through drift of spray in wind. This product has a potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. A level, well maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from rainfall-runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

PHYSICAL AND CHEMICAL HAZARDS

Combustible. Keep away from heat, sparks, and open flames. Keep container closed.

DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling. TARGA®⁴ must be used only in accordance with instructions on this label or in separate published Nissan instructions.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

Coveralls.

Chemical-resistant gloves made of barrier laminate or Viton.

Shoes plus socks.

Protective eyewear.

ENVIRONMENTAL CONDITIONS AND BIOLOGICAL ACTIVITY

TARGA® is a systemic herbicide that is rapidly absorbed by treated foliage and translocated to the roots and other growing points of the plant. When affected, younger plant tissues become chlorotic/necrotic and eventually die, leaving treated plants stunted and noncompetitive. In general, these symptoms are first observed within 7 to 14 days after application depending on the grass species treated and the environmental conditions.

The degree of control and duration of the effect of TARGA® depend upon the rate used, weed spectrum, weed size and variability, growing conditions at and following treatment, soil moisture, precipitation, tank mixtures, and spray adjuvant used.

Conditions conducive to healthy, actively growing plants optimize the performance of TARGA®. Unacceptable control may occur if TARGA® is applied to grasses stressed from:

- abnormal weather (excessive heat or cold, or widely fluctuating temperatures),
- hail damage,
- drought,
- water saturated soils,
- mechanical injury, or
- prior herbicide injury.

Grasses under these conditions are often less sensitive to herbicide activity. Delay application until the stress passes and weeds and crop resume growth.

Before making applications of TARGA® to crops previously under stress, or injured from other pesticide applications, the crop needs to be fully recovered and growing vigorously.

TARGA® is rainfast 1 hour after application.

IMPORTANT PRECAUTIONS

Injury to or loss of desirable trees, vegetation or adjacent sensitive crops may result from failure to observe the following:

- Prevent spray drift to desirable plants (refer to SPRAY DRIFT MANAGEMENT section of this label).
- Take all necessary precautions to avoid all or direct contact (such as spray drift) with non-target plants or areas. Most grass crops, including wheat, barley, rye, oats, sorghum, rice, and corn are highly sensitive to TARGA®.
- Carefully observe all sprayer cleanup instructions both prior to and after using this product, as spray tank residue may damage crops other than those included in the crop rotation section.

PROVISIA™¹ RICE

TARGA® is a selective post emergence herbicide that controls emerged annual and perennial grasses in Provisia™ Rice. TARGA® does not control sedges or broadleaf weeds. Applied at specified rates and timings, TARGA® controls the grasses listed in the “Provisia™ Rice - Weeds Controlled and Rate Selection” chart.

Use only in Provisia™ Rice for the control of red rice, volunteer rice types (conventional, Clearfield®¹ or hybrid volunteer rice), annual and perennial grasses in rice production.

- Apply TARGA® at 10 – 18 fl. Oz. per acre (0.07-0.12 lb ai/A) by ground or by air to Provisia™ Rice from the 1-leaf stage (BBCH 11) up to Panicle Initiation (BBCH 29-30).
- A sequential application program is necessary for complete control of red and volunteer rice due to extended emergence. Separate sequential applications by at least 10 days.
- Do not apply more than a total of 31 fluid ounces per acre (0.21 lb ai/A) per season or per year.
- Apply petroleum-based crop oil concentrate at 1.0% v/v (1 gal of product per 100 gal of spray solution), by ground or aerial application. DO NOT use less than 1 pt/A crop oil concentrate with low-volume (less than 12.5 gal./A) aerial or ground application.

Important Restrictions for Provisia™ Rice

- DO NOT apply more than 18 fluid ounces of TARGA per acre (0.12 lb ai/A) per application to Provisia™ Rice.
- DO NOT apply TARGA® through any type of irrigation equipment.
- DO NOT apply to any body of water except Provisia™ Rice fields.
- DO NOT apply more than a total of 31 fluid ounces of TARGA® per acre (0.21 lb ai/A) per season or per year to Provisia™ Rice.
- DO NOT make more than two applications of TARGA® to Provisia™ Rice per growing season or per year, with at least 10 days between applications.
- DO NOT apply TARGA® to rice fields that will be used for mollusc production during the treatment year.
- DO NOT apply TARGA® to Provisia™ Rice earlier than 1 leaf stage (BBCH 11) or later than Panicle initiation (BBCH 29-30).
- DO NOT release flood water from treated fields for 7 days after the second TARGA® application.
- DO NOT use flood water from treated fields for irrigation purposes for any other food/feed crops.
- Take all necessary precautions to avoid all direct or indirect contact (such as spray drift) with non-target plants or areas. Most grass crops, including wheat, barley, rye, oats, sorghum, rice (conventional and Clearfield®¹), and corn are sensitive to TARGA®.
- DO NOT apply TARGA® or any other herbicide that contains the active ingredient quizalofop-P-ethyl as a preplant burndown treatment prior to planting Provisia™ Rice.

RESISTANCE MANAGEMENT

For resistance management, TARGA® is a **Group 1** herbicide. While weed resistance to **Group 1** herbicides is common in a number of weed species, these herbicides remain an important component of successful weed control programs. Resistance management should be part a diversified weed control strategy that integrates multiple options including chemical, cultural, mechanical, and biological control tactics. Cultural control tactics include agronomic practices that improve the competitive ability of the crop via rotation, variety/cultivar selection, precision fertilizer placement and optimum crop plant density. Agronomic practices should also limit the development and spread of weeds by using clean crop seed (e.g. certified seed), prevent crop trait out-crossing, control weed influx from field borders, and manage weed seed at harvest / post-harvest to minimize the carryover weed seed-bank into the following crop. Mechanical control tactics include timely tillage where practical, equipment cleaning to avoid weed spread, and minimization of harvest crop seed losses in the field through close attention to timeliness of harvesting, correct setup of harvest equipment, and covering crop seed loads during harvest and transport to avoid dispersing seed. An example of a biological control tactic is field grazing during or after cropping to manage weeds and reduce weed seed production.

Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.

Chemical Control

- Start clean with tillage or an effective burndown herbicide program.
- Apply preemergence herbicides that provide soil residual control of broadleaf and grass weeds to reduce early season weed competition and allow for timely in-crop postemergence herbicide applications
- Use tank mixes and sequential applications with other herbicides possessing different modes of action (MOAs) that are also effective on the target weeds.
- Follow labeled application rate and weed growth stage specifications.
- **DO NOT** rely on a single herbicide mode of action for weed control during the growing season.
- Avoid application of herbicides with the same mode of action more than twice per growing season.
- Use recommended adjuvant, adequate spray volume, proper nozzle and pressure (see label) to ensure effective weed coverage for applications.
- Control weeds in field borders to prevent weeds from influx into field.

Scouting and Containment

- Scout fields before application to ensure optimum herbicide selection, rates and timing for effective control of target weeds.
- Scout fields after herbicide application to identify areas where weed control was ineffective. Consider application and environmental factors that may have led to incomplete control.
- Control weed escapes with herbicides possessing a different mode of action or use a mechanical control measure. Weed escapes should not be allowed to reproduce by seed or to proliferate vegetatively.
- Clean equipment before moving to a different field to avoid spread of resistant weeds (especially harvest and tillage equipment).
- Contact your state cooperative extension service, land grant university weed scientist, professional consultants, your herbicide supplier and/or your local sales representative if resistance is suspected.
- Prevent crop trait out-crossing to weeds and weed influx from border to field.

APPLICATION TIMING

TARGA® will control emerged grasses when applied at specific rates and timings. Apply TARGA® to young, actively growing grasses according to the rate chart that follows. Grass that emerge following the first TARGA® application will require an additional sequential treatment. Applications made to grasses that are larger than the sizes listed in the rate charts or to grasses under stress may result in unsatisfactory control.

TANK MIXES

Do not use tank mixtures of TARGA® with any pesticide or spray adjuvant except as directed on this label.

Refer to the labels of all tank mix products for information regarding use information (such as rates, timing, application information, and sprayer cleanup) and product precautions and restrictions (especially adjuvants – TARGA® requires the use of an adjuvant). The most restrictive provisions apply. If those instructions conflict with this label, do not tank mix the herbicide with TARGA®.

Nissan also advises that you first consult your state experiment station, university, or extension agent, Agricultural dealer or Nissan representative as to the potential for any adverse interactions (resulting in unacceptable grass control and/or crop injury) before using new herbicide, insecticide and fungicide mixtures. If no information is available, limit the initial use of TARGA® and the new herbicide, insecticide or fungicide product to a small area.

Always conduct a jar test to evaluate physical compatibility before applying a particular mixture to crops for the first time.

Tank mixes of TARGA® with postemergence broadleaf herbicides may result in reduced grass control. If grass control is reduced, an additional application of TARGA® may be required after grass plants begin to develop new leaves.

For tank mixing with glyphosate-containing products, spray grade ammonium sulfate may be used. Follow the [Roundup®¹⁰ brand agricultural herbicide][glyphosate] label directions regarding the addition of ammonium sulfate.

Broadleaf Weed Control:

For optimum control TARGA® should be applied separately from broadleaf herbicides. However, with tankmix applications of TARGA® and broadleaf herbicides, use the higher rate of TARGA® and follow the restrictions of the most restrictive herbicide. Potential tankmix partners are Facet®¹ L, Prowl®¹, Sharpen®¹, Basagran®¹, Command®², League™⁷, Permit®⁴, and Permit Plus®⁴. Due to potential weed control antagonism, DO NOT tank mix Targa® Herbicide with products containing Propanil, Triclopyr or Penoxsulam.

Application With Broadleaf Herbicides:

Under arid or stressful environmental conditions, tank mixtures with other broadleaf herbicides may show a small reduction in control of some grass species. Activity of the postemergence broadleaf herbicide in the tank mixture is not affected.

Split Applications with Postemergence Broadleaf Herbicides:

Applying TARGA® immediately prior to or following an application of a postemergence broadleaf herbicide may reduce control of some grasses. For best results, follow these instructions when making split applications:

- Apply postemergence broadleaf herbicides at least 24 hours after applying TARGA®.
- Apply TARGA® when grass begins to develop new leaves (generally 7 days after the postemergence broadleaf herbicide application) in fields treated with a postemergence broadleaf herbicide.

CROP ROTATION

- Do not rotate to crops other than Barley, Canola, Cotton, Crambe, Dry Beans, Flax, Lentils, Mint (Spearment and Peppermint, Peas (Dry and Succulent Peas), Snap Beans, Soybeans, Sugarbeets, Sunflowers, or Wheat within 120 days after application.
- DO NOT plant Provisia™ Rice in consecutive years in the same field except in the case of crop failure. In the case of crop failure, Provisia™ Rice may be replanted in the same year; but the 31 fl oz per acre seasonal maximum still applies even if an application was made prior to crop failure.
- In other rotational crops use a residual herbicide for red rice and grass control, such as Outlook®¹ herbicide, Verdict®¹ herbicide, Dual Magnum®⁵ or Dual II Magnum®⁵.
- If late germinating red rice is present in a Roundup Ready®¹⁰ crop prior to canopy closure, an application of glyphosate is recommended. Non-ALS and non-ACCase herbicides should also be used to control red rice and other grasses just prior to canopy closure.
- If late germinating red rice is present in a Liberty Link®⁶ crop prior to canopy closure, an application of glufosinate is recommended. Non-ALS and non-ACCase herbicides should also be used to control red rice and other grasses just prior to canopy closure.
- DO NOT fallow fields following Provisia™ Rice without repeated field tillage or glyphosate treatments to control volunteer red rice.
- DO NOT allow any Provisia™ Rice to go to seed in a non-rice year. This includes any fallow or crawfish productions fields.
- When practical, cultivate all rotational crops regardless of herbicide program.

SPRAY ADJUVANTS

For optimal performance, always mix TARGA® with a high quality Crop Oil Concentrate. If another herbicide is tank mixed with TARGA® to increase the weed spectrum, select adjuvants authorized for use with both products. Products must contain only EPA-exempt ingredients.

Apply petroleum-based crop oil concentrate at 1.0% v/v (1 gal of product per 100 gal of spray solution), by ground or aerial application. DO NOT use less than 1 pt/A crop oil concentrate with low-volume (less than 12.5 gal./A) aerial or ground application

PROVISIA™ RICE - WEEDS CONTROLLED AND RATE SELECTION			
	Maximum Size at Application (leaf)	TARGA® Applied Alone (fl oz product/A)	TARGA®* Tank Mixed with Broadleaf Herbicide (fl oz product/A)
Annual Grasses**			
Corn, Volunteer (Zea mays)***	10	Rice Crop: ≤ 3 leaf: 10 - 13 fl oz* > 3 leaf: 13 - 18 fl oz*	Sequential: The maximum use rate TARGA® is 31 fluid ounces per crop season or per year
Johnsongrass, Seedling (<i>Sorghum halepense</i>)	8		
Shattercane (<i>Sorghum bicolor</i>)	10		
Fall Panicum (<i>Panicum dactyloides</i>)	6		

Goosegrass (<i>Eleusine indica</i>)	6‡		
Sprangletop (<i>Leptochloa spp.</i>)	6		
Witchgrass (<i>Panicum capillare</i>)	6		
Barnyardgrass (<i>Echinochloa crus-galli</i>)	6		
Crabgrass, Large (<i>Digitaria sanguinalis</i>)	6‡		
Crabgrass, Smooth (<i>Digitaria ischaemum</i>)	6‡		
Junglerice (<i>Echinochloa colonum</i>)	6		
Texas Panicum (<i>Panicum texanum</i>)∞	4		
Red Rice (<i>Oryza sativa</i>)	4		
Volunteer Rice (Conventional, Clearfield, hybrids)	4		
Broadleaf Signalgrass (<i>Brachiaria platyphylla</i>)	6		
Perennial Grasses**			
Bermudagrass (<i>Cynodon dactylon</i>)	3" tall (or up to 6" runners)	13 –18 fl. oz..	Sequential: The maximum use rate TARGA® is 31 fluid ounces per crop season or per year
Johnsongrass, Rhizome (<i>Sorghum halepense</i>)	24"		
* Sequential application applied 10 – 21 days apart to allow for late emerging red rice or other annual grasses. Do not exceed a total of 31 fl oz/A per crop season or per year.			
** For annual and perennial grasses, up to 13 - 18 fl oz/A may be applied, based upon local experience. Under arid conditions use the higher use rate.			
*** Control includes Roundup Ready® ¹⁰ (glyphosate resistant), Liberty Link® ⁶ (glufosinate resistant), and IMI-Corn (imidazolinone resistant).			
‡ Length of lateral growth.			

APPLICATION EQUIPMENT

- See SPRAY DRIFT MANAGEMENT section for additional information and precautions.

Ground Application

Broadcast Application

- When applying by ground, use spray nozzles that will deliver medium or larger spray droplets as defined in the American Society of Agricultural and Biological Engineers (ASABE) standard ANSI/ASAE S572.1 (March 2009). (see Spray Drift Management section for additional information).
- Use flat fan or hollow cone nozzles at 25-60 psi.
- Do not use flood, rain drop, whirl chamber, or any other nozzle types that produce coarse, large spray droplets. In addition, do not use controlled droplet applicator (CDA) type nozzles as poor weed control or excessive spray drift may result.
- Use a minimum of 10 gal of water per acre in nonarid areas.
- Use a minimum of 15 gal of water per acre in arid areas.
- Do not exceed 40 gal of water per acre.
- Increase spray volume and pressure as weed or crop density and size increase.

Aerial Application

- When applying by air, use spray nozzles that will deliver coarse or larger spray droplets as defined in the American Society of Agricultural and Biological Engineers (ASABE) standard ANSI/ASAE S572.1 (March 2009). (see Spray Drift Management section for additional information).
- Use nozzle types and arrangements that provide optimum spray distribution and maximum coverage.
- Use a minimum of 5 gal of water per acre.

MIXING INSTRUCTIONS

1. Fill the tank 1/4 to 1/3 full of water.
2. While agitating, add the required amount of TARGA®. If TARGA® and a tank mix partner are to be applied together, consult the tank mix partner label for information on which should be added first (normally granules and powders are added first).
3. Continue agitation until the TARGA® is fully dispersed, at least 5 minutes.
4. Once the TARGA® is fully dispersed, maintain agitation and continue filling tank with water.
5. As the tank is filling, add the required volume of spray additives, always add these to the spray tank last.
6. Apply TARGA® spray mixture within a reasonable period of time of mixing to avoid product degradation (24 to 48 hrs). If the spray mixture stands for any period of time, thoroughly re-agitate before using.

SPRAYER CLEANUP

The spray equipment must be cleaned before TARGA® is sprayed. Follow the cleanup procedures specified on the labels of the previously applied products. If no directions are provided, follow the six steps outlined in After Spraying TARGA®. It is very important that any buildup of dried pesticide deposits which have accumulated in the application equipment be removed prior to spraying TARGA®. Steam-cleaning spray tanks to facilitate the removal of any caked deposits of previously applied products will help prevent accidental crop injury.

At the End of the Day

During periods when multiple loads of TARGA® herbicide are applied, at the end of each day of spraying the interior of the tank should be rinsed with fresh water and then partially filled, and the boom and hoses flushed. This will prevent the buildup of dried pesticide deposits which can accumulate in the application equipment.

After Spraying TARGA® and Before Spraying Crops Other Than Those Listed in the Crop Rotation Section

To avoid subsequent injury to desirable crops, thoroughly clean all mixing and spray equipment immediately following applications of TARGA® as follows:

1. Drain tank; thoroughly rinse spray tanks, boom, and hoses with clean water. Loosen and physically remove any visible deposits.
2. Fill the tank with clean water and 1 gal of household ammonia* (contains 3% active) for every 100 gal of water. Flush the hoses, boom, and nozzles with the cleaning solution. Then add more water to completely fill the tank. Circulate the cleaning solution through the tank and hoses for at least 15 min. Flush the hoses, boom, and nozzles again with the cleaning solution, and then drain the tank.
3. Remove the nozzles and screens and clean separately in a bucket containing cleaning agent and water.
4. Repeat step 2.
5. Rinse the tank, boom, and hoses with clean water.
6. If only ammonia is used as a cleaner, the rinsate solution may be applied back to the crop(s) listed on this label. Do not exceed the maximum labeled use rate. If other cleaners are used, consult the cleaner label for rinsate disposal instructions. If no instructions are given, dispose of the rinsate on site or at an approved waste disposal facility.

* Equivalent amounts of an alternate-strength ammonia solution or Nissan approved cleaner can be used in the cleanout procedure. Carefully read and follow the individual cleaner instructions. Consult your Ag dealer, or applicator or Nissan representative for a listing of approved cleaners.

Notes:

1. CAUTION: Do not use chlorine bleach with ammonia as dangerous gases will form. Do not clean equipment in an enclosed area.
2. Steam-clean spray tanks prior to performing the above cleanout procedure to facilitate the removal of any caked deposits.
3. When TARGA® is tank mixed with other pesticides, all cleanout procedures should be examined and the most rigorous procedure should be followed.
4. In addition to this cleanout procedure, all precleanout guidelines on subsequently applied products should be followed as per the individual labels.
5. Where routine spraying practices include shared equipment frequently being switched between applications of TARGA® and applications of other pesticides to TARGA-sensitive crops during the same spray season, Dedicate a sprayer to TARGA® to further reduce the chance of crop injury.

SPRAY DRIFT MANAGEMENT

The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making application decisions.

AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

IMPORTANCE OF DROPLET SIZE

The most effective way to reduce drift potential is to apply coarse or larger spray droplets as defined by the ASABE standard ANSI/ASAE S572.1 (March 2009). The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. APPLYING LARGER DROPLETS REDUCES DRIFT POTENTIAL, BUT WILL NOT PREVENT DRIFT IF APPLICATIONS ARE MADE IMPROPERLY OR UNDER UNFAVORABLE ENVIRONMENTAL CONDITIONS! See **Wind**, **Temperature and Humidity**, and **Temperature Inversions** sections of this label.

Controlling Droplet Size - General Techniques

- **Flow Rate/Orifice Size** - Using the highest flow rate nozzles (largest orifice) that are consistent with pest control objectives reduces the potential for spray drift. Nozzles with higher rated flows produce coarser droplet spectra..

- **Pressure** - The lowest spray pressures recommended for the nozzle produce the largest droplets. Higher pressure reduces droplet size and does not improve canopy penetration. WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.
- **Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles.

Controlling Droplet Size - Aircraft

- **Number of Nozzles** - Using the minimum number of nozzles with the highest flow rate that provide uniform coverage will produce a coarser droplet spectrum..
- **Nozzle Orientation** - Orienting nozzles in a manner that minimizes the effects of air shear will produce the coarsest droplet spectra. For some nozzles such as solid stream, pointing the nozzles straight back parallel to the airstream will produce a coarser droplet spectrum than other orientations.
- **Nozzle Type** - Solid stream nozzles (such as disc and core with swirl plate removed) oriented straight back produce larger droplets than other nozzle types.
- **Pressure** - Selecting the pressure that produces the coarsest droplet spectrum for a particular nozzle and airspeed reduces spray drift potential. For some nozzle types such as solid streams, lower pressures can produce finer droplet spectra and increase drift potential.
- **Boom Length** - The boom length must not exceed 3/4 of wing or rotor length – longer booms increase drift potential.
- **Application Height** - Application more than 10 ft above the canopy increases the potential for spray drift.

BOOM HEIGHT

Setting the boom at the lowest labeled height (if specified) which provides uniform coverage reduces the exposure of droplets to evaporation and wind. For ground equipment, the boom should remain level with the crop and have minimal bounce.

WIND

Apply when wind speeds are less than 15 mph. The wind speed range for optimum performance is between 3 and 10 mph. At wind speeds less than 3 mph temperature inversions may exist, and at wind speeds above 10 mph spray patterns may be compromised. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. AVOID GUSTY OR WINDLESS CONDITIONS.

Note: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

TEMPERATURE AND HUMIDITY

Setting up equipment to produce larger droplets to compensate for droplet evaporation can reduce spray drift potential. Droplet evaporation is most severe when conditions are both hot and dry.

TEMPERATURE INVERSIONS

Do not apply during temperature inversions. Drift potential is high during a temperature inversion. Surface temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Surface temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Mist or fog may indicate the presence of an inversion in humid areas. Inversions may also be identified by producing smoke and observing its behavior. Smoke that remains close to the ground, or moves laterally in a concentrated cloud under low wind conditions indicates a surface inversion. Smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are minimizing drift potential and not interfering with uniform deposition of the product.

AIR ASSISTED (AIR BLAST) FIELD CROP SPRAYERS

Air assisted field crop sprayers carry droplets to the target via a downward directed air stream. Some may reduce the potential for drift, but if a sprayer is unsuitable for the application and/or set up improperly, high drift potential can result. It is the responsibility of the applicator to determine that a sprayer is suitable for the intended application, is configured properly, and that drift potential has been minimized.

Note: Air assisted field sprayers can affect product performance by affecting spray coverage and canopy penetration. Read the specific crop use and application equipment instructions to determine if an air assisted field crop sprayer can be used.

SENSITIVE AREAS

Making applications when there is a sustained wind moving away from adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is an effective way to minimize the effect of spray drift.

DRIFT CONTROL ADDITIVES

Using product compatible drift control additives can reduce drift potential. When a drift control additive is used, read and carefully observe cautionary statements and all other information on the additive's label. If using an additive that increases viscosity, ensure that the nozzles and other application equipment will function properly with a viscous spray solution. Preferred drift control additives have been certified by the Council of Producers & Distributors of Agrotechnology (CPDA).

UPWIND SWATH DISPLACEMENT

When applications are made with a crosswind the swath will be displaced downwind. An adjustment for swath displacement is made on the downwind edge of the application site by shifting the path of the application equipment upwind.

SPRAY DRIFT CONTROL RESTRICTIONS

- Where states have more stringent regulations they must be observed.

AERIAL APPLICATIONS

- When applying by air, use spray nozzles that will deliver coarse or larger spray droplets as defined in the American Society of Agricultural and Biological Engineers (ASABE) standard ANSI/ASAE S572.1 (March 2009).
- The boom length must not exceed 75% of the wing span or 80% of the rotor blade diameter.
- Applications with wind speeds greater than 15 miles per hour are prohibited.
- Applications into temperature inversions are prohibited.
- Spray must be released at the lowest height consistent with pest control objectives and flight safety.
- Applicators must consider the effects of nozzle orientation and flight speed when determining droplet size spectrum.

GROUND APPLICATIONS

- When applying by ground, use spray nozzles that will deliver medium or larger spray droplets as defined in the American Society of Agricultural and Biological Engineers (ASABE) standard ANSI/ASAE S572.1 (March 2009).
- Applications with wind speeds greater than 15 miles per hour are prohibited.
- Applications into temperature inversions are prohibited.
- Apply spray at the lowest height that is consistent with pest control objectives.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage and disposal.

PESTICIDE STORAGE: Store product in original container only. Store in a cool dry place.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available.

[(NOTE TO REVIEWER: The following language is for non-refillable plastic containers having a capacity equal to or less than 5 gallons)]

For Plastic Containers: Triple rinse container (or equivalent) promptly after emptying. Then offer the container for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.]

[(NOTE TO REVIEWER: The following language is for non-refillable plastic containers having a capacity greater than 5 gallons)]

For Plastic Containers: Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.]

[For Fiber Sacks: Completely empty fiber sack by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into manufacturing or application equipment. Then dispose of sack in a sanitary landfill or by incineration if allowed by State and local authorities.]

[For Fiber Drums with Liners: Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of liner in a sanitary landfill or by incineration if allowed by State and local authorities. If drum is contaminated and cannot be reused, dispose of in the same manner.]

[For Bags Containing Water Soluble Packets: Do not reuse the outer box or the resealable plastic bag. When all water-soluble packets are used, the outer packaging should be clean and may be disposed of in a sanitary landfill or by incineration, or if allowed by State and local authorities, by open burning. If burned, stay out of smoke. If the resealable plastic bag contacts the formulated product in any way, the bag must be triple-rinsed with clean water. Add the rinsate to the spray tank and dispose of the outer wrap as described above.]

[For Metal Containers (non-aerosol): Triple rinse container (or the equivalent) promptly after emptying. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.]

[For Paper and Plastic Bags: Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.]

[*(NOTE TO REVIEWER: The following language is for refillable containers having a capacity greater than 5 gallons)*

CONTAINER DISPOSAL: For Bulk Containers - Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.]

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